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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,077	11/26/2001	Frederick Michael Mako	MAKO-8 CONT III	1512

7590

05/06/2003

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.



EXAMINER	
ART UNIT	PAPER NUMBER
	7

DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 19 Feb 2003 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.       | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449             | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-9 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-8; 9 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are: ☐ acceptable;  
☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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### Part III DETAILED ACTION

The disclosure is objected to because of the following informalities: Page 3, line 29 & page 11, line 8, note that it remains unclear whether "rhombohedrion" is the correct spelling. Page 32, line 31, note that "FMTSEC" remains vague in meaning. Page 45, lines 1, 2, note that "dicotron instability" remains vague in meaning. In general, applicants' should review and, where necessary, revise the specification to ensure that all elements labeled in the drawing figures are correspondingly described in the specification. Appropriate correction is required.

The drawings are objected to because reference labels should be provided for those figures depicting schematic aspects of the invention. In general, the drawing figures should contain reference labels correspondingly described in the specification. Correction is required.

The drawings are objected to under 37 C<sup>F</sup>AR § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the circular or rhombohedron shape screens respectively must be shown or the feature canceled from the claim. No new matter should be entered.

Applicants' are required to address this objection in the next response.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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With respect to claims 1 & 9, there does not appear to be any support in the original specification for the limitation of “N is an integer greater than or equal to one”. With respect to claim 1, there does not appear to be support in the original specification that the claimed expression is raised to the “N” power as recited in the claim. Note from the specification that the corresponding expression is raised to the  $\omega t/2\pi$  power as disclosed at the bottom of page 13. Furthermore, there is no apparent disclosure of the equivalence of  $\omega t/2\pi$  to “N” which is claimed. Accordingly, these limitations have been treated as “new matter” absent any explanation of why they should not be considered “new matter”.

Claims 1-9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it remains unclear in what manner does the “force” (i.e. a non-physical characteristic) “encompasses” the emitting surface and section (i.e. a physical feature). Moreover, the nature of the electron flow between the emitting surface & the section still needs to be clarified. If unidirectional electron flow is what is intended, then it should be clearly claimed. If some other mechanism of electron flow is intended, then such mechanism should be clearly claimed. Even in light of the specification & applicants' comments, this point remains unclear. Moreover, it is unclear the relationship between the parameters “ $N_f$ ” and “N” (i.e. the same, different, etc). Clarification is needed.

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In claim 4, note that it is unclear how the "force" (recited herein) is related to the earlier recited instance of "force". For example, is it related to the "oscillating force" recited in claim 1 or to the "force" recited in claim 2, since this claim indirectly depends from both claims? Accordingly, should --oscillating-- precede "force" in line 3? Clarification is needed.

In claim 8, it remains unclear which screen is intended by the recited "screen". Applicants' comments indicate that "one or any specific number of screens" is intended. If such is the case, then the claim should be amended to reflect such a situation.

In claim 9, last paragraph, note that reference to "section" is vague in meaning. Clarification is needed.

The claims has been found objectionable for reasons set forth below:

In claim 1, second paragraph, note that --electron-- should precede "emitting" & "a transmitting" should be rephrased as --an electron transmitting--; last paragraph, note that --transmitting and emitting-- should precede appropriate occurrences of "section".

Claims 1-9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308 4902.

BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817